

ATTORNEY'S DOCKET NO.
026656.0283

PATENT APPLICATION

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APPLICATION FOR U.S. PATENT UNDER 37 C.F.R. § 1.53(b)
TRANSMITTAL FORM

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Sir:

Transmitted herewith for filing is the patent application
of:

Inventor or Application Identifier:

David W. Deaton, et al.

Entitled: POINT-OF-SALE SERVER AND METHOD

Enclosed are:

☒ Specification (57 Total Pages)
☒ Drawing(s) (4 Total Sheet(s) of ☒ Formal ☐ Informal)
☒ Combined Declaration and Power of Attorney (3 Total Pages)
☒ Newly executed (original or copy)
☐ Copy from a prior application
(for continuation/divisional only)

☒ An Assignment of the invention to Incentech, Inc. is
attached. A separate cover sheet in compliance with 37 C.F.R.
§ 3.28 and § 3.31 is included with an Assignment recordal fee of
\$40.00 pursuant to 37 C.F.R. § 1.21(h).

☒ Information Disclosure Statement (IDS) PTO-1449
☒ Copies of IDS Citations.

☐ Preliminary Amendment

☒ Certificate of Mailing

☒ Return Receipt Postcard

☒ Other: Petition to Make Special - Accelerated Examination

Applicant is:

☐ Large Entity
☒ Small Entity
☒ Small Entity Statement enclosed
☐ Small Entity Statement filed in prior application.
Status still proper and desired.

The accompanying application is:

☒ Original
☐ Continuation ☐ Divisional ☐ Continuation-In-Part (CIP)

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of prior application No. _____ which is hereby incorporated
by reference therein.

FEE CALCULATION					FEE
	Number		Number Extra	Rate	Basic Fee
					\$ 380.00
Total Claims:	97	-20 =	77	X \$9 =	\$ 693.00
Independent Claims	13	- 3 =	10	X \$39 =	\$ 390.00
TOTAL FILING FEE =					\$ 1463.00

X Enclosed is a check in the amount of \$1,463.00 to satisfy
filing fee requirements under 37 C.F.R. § 1.16. Please charge
any additional fees or credit any overpayment to Deposit Account
No. 02-0384 of BAKER & BOTTS, L.L.P. A duplicate copy of this
sheet is enclosed.

Respectfully submitted,
BAKER & BOTTS, L.L.P.
Attorneys for Applicants


Bradley P. Williams
Reg. No. 40,227

Correspondence Address:
Jerry W. Mills, Esq.
Baker & Botts, L.L.P.
2001 Ross Avenue
Dallas, Texas 75201-2980
(214) 953-6665

Date: July 15, 1999

Applicant or Patentee: David W. Deaton, et al.
 Serial No. or Patent No.:
 Title: POINT-OF-SALE SERVER AND METHOD

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
 (37 CFR 1.9(f) & 1.27(c)) -- SMALL BUSINESS CONCERN**

I hereby declare that I am an official of the small business concern empowered to act on behalf of the concern identified below:

Name of Small Business Concern: INCENTECH, INC.
 Address of Small Business Concern: P. O. Box 2816, Abilene, Texas 79604-0387

I hereby declare that the above-identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled POINT-OF-SALE SERVER AND METHOD by inventors DAVID W. DEATON and RODNEY G. GABRIEL, described in the specification filed herewith.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights in the invention is listed below, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e):

NONE

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or my maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of Officer Signing: David W. Deaton
 Title of Officer: President
 Address of Person Signing: P. O. Box 2816, Abilene, Texas 79604-0387

Signature:

David W. Deaton

Date:

7/13/99

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PATENT APPLICATION

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E-156223465US*

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POINT-OF-SALE SERVER AND METHOD

TECHNICAL FIELD OF THE INVENTION

This invention relates generally to marketing and more particularly to a point-of-sale server and method.

5

BACKGROUND OF THE INVENTION

Market surveys and research provide a manufacturer with information that it may use to respond to changing market conditions. For example, surveys may be conducted which ask consumers whether they favor a particular product over another. In addition, the actual past sales of a manufacturer's product may be compiled and analyzed.

Although some product information is available from these techniques, relying on conventional techniques for assessing one's place in the market may provide less than satisfactory results. For example, by the time market research informs a manufacturer that his product is underperforming in a particular market, the manufacturer may not have time to appropriately respond. Furthermore, temporary market conditions may affect the purchase of a particular manufacturer's product or its competitor's products, and these temporary conditions may no longer be applicable by the time conventional market research analysis is completed.

United States Patent No. 4,972,504, entitled "Marketing Research System and Method for Obtaining Retail Data on a Real-Time Basis" to James N. Darrel, Jr., is exemplary of prior retail store marketing systems. The patent describes a system that stores retail data on a real-time basis and subsequently provides information remotely. The described system does not, however, communicate the data to a remote location, on a substantially real-time basis, allowing manufacturers or other clients to respond to market conditions rapidly; nor does the described system enable rapid response back to the point-of-sale to vary marketing parameters.

SUMMARY OF THE INVENTION

Accordingly, a need has arisen for an Internet point-of-sale server and method that addresses the shortcomings of prior methods and apparatuses.

5 According to one embodiment of the invention, a method for use in marketing includes detecting, at the point-of-sale, a plurality of Uniform Product Codes associated with respective items purchased by a customer and transmitting, on a substantially real-time basis, the plurality of
10 Uniform Product Codes over the Internet to a remote computer connected to the Internet.

 According to another embodiment of the invention, a system for use in marketing includes an electronic cash register for processing items at the point-of-sale. The
15 system also includes a computer remote from the point-of-sale and connected to the Internet. The system also includes a substantially real-time communication link operable to carry information associated with the items from the point-of-sale to the Internet on a substantially
20 real-time basis for receipt by the computer.

 Embodiments of the invention provide numerous technical advantages. For example, in one embodiment of the invention, a manufacturer is provided access to real-time product purchase information. This real-time access
25 allows the manufacturer to respond appropriately to market condition. For example, a manufacturer may effect a price reduction in stores of products that are being purchased in less than desired quantities. In addition, a manufacturer may provide customer incentives, such as redeemable
30 coupons, on a real-time basis to particular customers identified to the manufacturer through substantially real-

time purchasing data. Such an ability allows a manufacturer, for example, to market its products to purchasers of competing products.

According to another embodiment of the invention, a
5 manufacturer is able to receive product information associated only with its products and with its competitors products to assess the manufacturer's position in the market. According to another embodiment, a manufacturer may respond to market conditions by automatically
10 communicating a price change through the Internet to the cash register or to electronic shelf tags located in retail stores. Another embodiment of the invention allows a manufacturer to effect a credit to a retail store for reducing the price of a manufacturer's product. Such
15 automatic crediting facilitates the retail store's role in changing the retail price on the manufacturer's products and allows a manufacturer to market its products based upon the product's performance in the marketplace. According to another embodiment of the invention, a customer may submit
20 a shopping list and receive price information associated with the shopping list from a plurality of different stores. Such reception allows a customer to, from the customer's home, comparison shop and select an appropriate store from which to actually purchase the desired products.

25 Other technical advantages are readily apparent to one skilled in the art from the following figures, descriptions and claims.

BRIEF DESCRIPTION OF THE DRAWINGS

For a more complete understanding of embodiments of the invention and the advantages thereof, reference is now made to the following descriptions taken in connection with the accompanying drawings in which:

FIGURE 1 is a block diagram of a system for providing point-of-sale information to a manufacturer;

FIGURE 2A is a block diagram of a store showing details of a portion of the system of FIGURE 1 for providing information from the point-of-sale to a manufacturer;

FIGURE 2B is a block diagram of a store showing alternative details of a portion of the system of FIGURE 1 for providing point-of-sale information to a manufacturer;

FIGURE 2C is a block diagram of a store showing alternative details of a portion of the system of FIGURE 1 for providing point-of-sale information to a manufacturer;

FIGURE 2D is a block diagram of a store showing alternative details of a portion of the system of FIGURE 1 for providing point-of-sale information to a manufacturer;

FIGURE 3 is a block diagram of the points-of-sale illustrated in FIGURES 2A, 2B, and 2C showing additional details of one embodiment of a point-of-sale;

FIGURE 4A is a block diagram of the UPC server illustrated in FIGURE 1;

FIGURE 4B is a block diagram of one embodiment of the kiosk of FIGURE 2D;

FIGURE 5 is a flow chart illustrating a summary of steps performed in conjunction with the system of FIGURE 1 to allow a plurality of manufacturers to market their products to customers;

FIGURE 6 is a block diagram illustrating an example server of the system of FIGURE 1, showing units for receiving information, filtering that information, and distributing the filtered information to appropriate manufacturers;

FIGURE 7 is a flow chart illustrating automatic response by a manufacturer in response to the meeting of certain thresholds relating to the manufacturer's products;

FIGURE 8 is a block diagram of an example UPC server containing circuitry and/or software operable to concentrate e-mails provided by a plurality of manufacturers for receipt by a customer of a store;

FIGURE 9 is a block diagram illustrating the use of a UPC server in facilitating coupon redemption validation and electronic crediting;

FIGURE 10 is a block diagram showing an additional embodiment of the invention in which a UPC server facilitates electronic settlement of credit and debits between a store and a manufacturer;

FIGURE 11 is a block diagram of a system for remotely effecting a product price change in a retail store; and

FIGURE 12 illustrates a block diagram of a portion of the system of FIGURE 1, showing the exchange of communication between a customer computer and a UPC server.

DETAILED DESCRIPTION OF THE INVENTION

Embodiments of the invention and their advantages are best understood by referring to FIGURES 1-12 of the drawings, like numerals being used for like and corresponding parts of the various drawings.

FIGURE 1 is a block diagram of a system 10 for providing point-of-sale information to a manufacturer 16. System 10 includes a UPC server 12 connected to one or more stores 14 by a communication link 24. System 10 also includes one or more manufacturers 16 connected to UPC server by communication link 26. In addition to manufacturers 16, vendors 20 and wholesalers 22 may also be connected to UPC server 12 by communications links 32 and 30, respectively. Vendors 20, wholesalers 22, manufacturers 16, competing retailers 14, or any other entity that subscribes to the services offered by UPC server 12 may be referred to herein as clients. System 10 also includes a customer computer 18 for accessing UPC server 12 via communication link 28. According to one embodiment of the invention, communications links 24, 26, 30, and 32 utilize the Internet.

According to the teachings of the invention, point-of-sale information obtained at store 14 is communicated on a substantially real-time basis to UPC server 12. Such point-of-sale information may include UPC codes for purchased products, UPC codes for redeemed coupons, prices of purchased products, other suitable identifications of purchased products, and other suitable data obtained at the point-of-sale, including codes not currently used. Additional point-of-sale information may include a store identification such as an Internet address, the register or

lane number, and additional data such as lines of print sent to the receipt tape, smart card contents, customer IDs, and receipt lines including item description, quantity, and price, and receipt total. The entire contents of a customer's smart card may also be provided to UPC server 12. In addition, payment instrument data such as credit card number, check number, and debit card number may be transferred. Such numbers may be used as unique customer identification codes for identifying particular customers. The identification of particular customers allows determining what products a particular customer purchases, which may be used in marketing.

The communicated information is then made available on a substantially real-time basis to manufacturers 16, vendors 20, wholesalers 22, and other appropriate clients. By providing point-of-sale information on a substantially real-time basis, manufacturers 16, vendors 20, and wholesalers 22 may respond to the purchase or non-purchase of goods or services associated, respectively, with manufacturers 16, vendors 20, and wholesalers 22. For example, a manufacturer 16 may receive point-of-sale information indicating a market share far below their normal market share. In such a case, manufacturer 16 may instantly lower prices on its goods to be more competitive.

Furthermore, a manufacturer 16 may offer, on an individualized basis, incentives to a customer of store 14 based upon the customers past purchasing history, purchases made in a current transaction, a combination of these purchases, or regardless of the purchases of the customer. By providing point-of-sale information on a substantially real-time basis to, for example, manufacturer 16,

individualized customer incentives may be provided by the manufacturer.

FIGURE 2A is a block diagram of store 14 showing details of a portion of the system of FIGURE 1 for providing information from a point-of-sale 36, 38, and 40 to a manufacturer 16. Store 14 includes a plurality of points-of-sale 36, 38, and 40. Each of the points-of-sale is connected to a router 34 via a communication link 42. Router 34 receives information from each of the points-of-sale 36, 38, and 40 on a substantially real-time basis and directs such information, on a substantially real-time basis, over communication link 24 to UPC server 12, illustrated in FIGURE 1. Points-of-sale 36, 38, and 40 are described in greater detail below in conjunction with FIGURE 3.

FIGURE 2B is a block diagram of a store 14 showing alternative details of a portion of system 10 for providing point-of-sale information to manufacturer 16. In this embodiment of store 14, router 34, and incentive controller 44 are replaced with a register controller 46. In this embodiment, register controller 46 operates to provide information to points-of-sale 36, 38, and 40 related to product prices and descriptions and, in addition, transmits point-of-sale information to manufacturers 16 over communication link 24. In addition, register controller 46 receives information from manufacturers 16 for delivery to the customer at the points-of-sale 36, 38, 40. Such an embodiment incorporates the design of register controller 46 for reception of information from manufacturers 14 according to some standard protocol. Alternatively, a register local area network 48 may be tapped into and

point-of-sale information may be provided to manufacturers 16 without designing register controller according to a particular protocol.

FIGURE 2C is a block diagram of store 14 showing alternative details of a portion of system 10 for providing point-of-sale information to a client, such as manufacturer 16. In this embodiment of store 14, router 34 is replaced with an incentive controller 44. Incentive controller 44 receives point-of-sale information directly from points-of-sale 36, 38, and 40 on a substantially real-time basis over, for example, communication link 42. Incentive controller 44 then transmits the point-of-sale information on a substantially real-time basis over communication link 24 to UPC server 12. Alternatively, incentive controller 44 is associated with points-of-sale 36, 38, 40, but store 14 communicates with UPC server 12 through other means.

Whether or not connected to UPC server 12, incentive controller 44 may provide incentives, such as redeemable coupons or a written notification of a future product discount or advertising message, to customers at points of sale 36, 38, 40, recommend such incentives to manufacturer 16, or process incentives generated by manufacturer 16. Incentive controller 44 may also be used in validating product purchases in conjunction with products offered at a discount or for products for which coupons are redeemed. Incentive controller 44 may generate incentives based upon a customer's past purchasing history, a customer's present purchases, a combination of these two, or other suitable techniques.

Exemplary methodology for generating incentives by incentive controller 44 is described in U.S. Patent

5,687,322 to Deaton et al., which is incorporated herein by reference and in U.S. Patent Application Serial Number 09/320,114 to Deaton et al., entitled *Method and System for Providing Customer Incentives Utilizing Dual Customer*
5 *Identifications*, which is incorporated herein by reference for all purposes. Incentive controller 44 may be formed integral with a register controller used by store 14 (not explicitly shown in FIGURE 2C) that controls registers associated with each point-of-sale. For example, the
10 register controller may provide each individual register information associating each bar code with a description and associated price.

FIGURE 2D is a block diagram of store 14 showing alternative details of a portion of system 10 for providing
15 point-of-sale information to a client, such as manufacturer 16. In this embodiment, store 14 includes a kiosk 47. Kiosk 47 allows a customer of store 14 to view and select incentives available to the customer. Details of one example of kiosk 47 are described in greater detail in
20 conjunction with FIGURE 4B. In the illustrated embodiment, kiosk 47 is connected to UPC server 12 by communication link 24; however, a kiosk may be utilized that is either not connected to UPC server 12 or that is indirectly connected to UPC server 12 through another element at store
25 14. Register controller 46 and incentive controller 44 are also illustrated in FIGURE 2D. Register controller 46 is connected to kiosk 47 by a communication link 49. Incentive controller 44 is connected to kiosk 47 by communication link 51.

30 According to the teachings of the invention, point-of-sale information is communicated through communication link

24 to UPC server 12. Such information is then communicated to a manufacturer 16. In response to receiving information from the point-of-sale, manufacturer 16 may communicate, through UPC server 12, incentives to be communicated to a customer of store 14. Kiosk 47 provides a way for the incentive to be communicated to the customer.

Kiosk 47 receives an incentive over communication link 24. A customer entering store 14 may proceed to kiosk 47 to determine what incentives are available. Kiosk 47 may then provide the customer a printed redeemable coupon or communicate a future electronic discount. In the case of a printed redeemable coupon, a coupon is distributed by kiosk 47 that may be redeemed at point-of-sale 36, 38, 40. In the case of a future electronic discount, the customer is identified at kiosk 47 by, for example, a customer loyalty card, a smart card, a credit card, a debit card, or other method of identification. After identification, an incentive available to the customer is communicated to the customer by, for example, printing of the incentive on a viewable screen or on a printer. In addition to communicating the future electronic discount to the customer, kiosk 47 communicates the future electronic discount to incentive controller 44 for application when the customer is identified at point-of-sale 36, 38, 40 and the customer purchases the product associated with the future electronic discount. As an alternative, kiosk 47 may communicate incentives available to all customers, as opposed to particularly identified customers, in which case communication of individual electronic discounts to incentive controller 44 is unnecessary.

It should be understood that although a particular configuration of store 14 is illustrated in FIGURE 2D, other configurations may be utilized, including combining register controller 46 and incentive controller 44 into a single integrated device, combining incentive controller 44 and kiosk 47 into a single integrated device, and eliminating redundant communication links. For example, according to one embodiment, kiosk 47 and register controller 46 may be connected to UPC server 12 solely through incentive controller 44, and register controller 46 may be connected to kiosk 46 solely through incentive controller 44.

FIGURE 3 is a block diagram of particular examples of points-of-sale 36, 38, and 40 illustrated in FIGURES 2A, 2B, and 2C showing additional details of one embodiment of a point-of-sale 36. Although point-of-sale 36 includes a particular collection of items, "point-of-sale" as used herein below without a reference numeral refers to the general location at which products are purchased. Point-of-sale 36 includes an electronic cash register 50. Electronic cash register 50 receives a signal indicative of the bar code of an item scanned by a scanner 52. A scanned item may include a product for purchase, a coupon being redeemed, or other suitable item bearing a scannable code. Based upon the signal indicative of the UPC bar code, a price is associated with the scanned item as well as a description of the scanned item. The price of the item and the description are printed on a printer 54. The price and description of an item are associated with a scanned bar code through communication of register 50 with a register controller (not explicitly controlled). In the case of a

single point-of-sale 36, register 50 may itself maintain a database associating bar codes with related price and product descriptions.

Between scanner 52 and register 50 is a wedge 56.
5 Wedge 56 intercepts information from scanner 52 and provides it along communication link 42B to router 34. A wedge allows a single signal to be split into multiple signals for receipt by multiple devices or, either alternatively or in combination, allows a signal to be
10 inserted onto an existing communication link. An example of wedge 56 is an RS-232 Y-cable used to enable two devices, for example computers, to share a single serial device; however, other suitable wedges may be utilized. Therefore, by providing a signal indicative of the bar code
15 of a scanned item, wedge 56 allows generation of information describing products and coupons scanned at the point-of-sale. Similarly, a wedge 58 disposed between register 50 and printer 54 receives information from register 50, allowing transmission of information along
20 communication link 42A describing price and product information.

In addition to providing point-of-sale information, wedges 56 and 58 may receive information generated by manufacturers 16 for providing to a customer at point-of-
25 sale 36, such as customer incentives. For example, a manufacturer may offer a customer a coupon for a product in response to the customer's purchase of particular products. Upon receiving information describing the customer's purchase, manufacturer 16 may provide a signal through
30 point-of-sale server 12 directed for a customer utilizing point-of-sale 36. Communication link 42A may carry such a

signal to wedge 58 and it may be printed on printer 54, informing the customer of the incentive. Alternatively, a separate printer or a monitor at the point-of-sale may be used to communicate incentives to customers.

5 A smart card reader 51 may be connected to register 50. Smart card reader 51 receives a smart card storing an identification of a customer. The smart card also includes a memory for storing awards. Thus, through smart card reader 51, awards may be generated and applied at point-of-sale 36, 38, 40.

10 FIGURE 4A is a block diagram of one example of UPC server 12. UPC server 12 may be implemented in many forms. In the example illustrated in FIGURE 4A, UPC server 12 includes a processor 60 associated with a storage device 62 and a memory device 64. Processor 60 may also be associated with an input device 66 and an output device 68. Memory 64 includes UPC server software 70. UPC server software 70 may be executed by processor 60 while stored in memory 64. Alternatively, UPC server software may be executed from storage area 62. UPC server software 70 contains software coding sufficient to execute functions performed by UPC server 12 described in greater detail below. UPC server 12 may also be implemented in various other forms, including the use of ASICs or other hardware configurations.

25 FIGURE 4B is a block diagram illustrating one embodiment of kiosk 47. In the illustrated embodiment kiosk 47 includes a card reader 140, a display 142, a printer 144, and a keyboard 146; however, other suitable kiosks may be used. For example, kiosk 47 may include a separate smart card reader for receiving a smart card.

Display 142 may communicate incentives and provide additional information to a customer. Display 142 may be a touch-sensitive screen for receiving information from the customer, such as information related to which incentives the customer desires. Keypad 146 also allows a customer to provide information to kiosk 47. For example, a customer may provide a name, address, telephone number, or other suitable indication of the customer's identity. Card reader 140 may also be used to identify a customer by receipt of a customer card, credit card, debit card, or other instrument from which the customer's identity may be determined. Printer 144 may be used in conjunction with display 142 to generate a shopping list of items for which the customer will receive discounts when the items are purchased. Kiosk 47 may be used in conjunction with distribution of incentives as described above in conjunction with FIGURE 2D.

FIGURE 5 is a flow chart illustrating a summary of steps performed in conjunction with system 10 to allow a manufacturer 16 to market its products to customers of store 14. The process begins at a step 73. At a step 74, manufacturer 16 receives point-of-sale purchase information from UPC server 12. Point-of-sale purchase information is provided to UPC server 12 from store 14 through communication link 24. According to one embodiment, communication link 24 provides Internet access to store 14 and therefore, connects UPC server 12 to store 14 via the Internet. According to the embodiment illustrated in FIGURE 2A, such point-of-sale information is provided from individual points of sale 36, 38, 40 to a router 34 for transmission along communication link 24. In the

embodiment illustrated in FIGURE 2B, such point-of-sale information is provided by points of sale 36, 38, and 40 to an incentive controller 44, for communication over communication link 24 to point-of-sale server 12. In the
5 embodiment illustrated in FIGURE 2C, such point-of-sale information is provided by points of sale 36, 38, and 40 to either a register controller 46 for communication over communication link 20 to UPC server 12, or by eavesdropping by UPC server 12 on a register local area network 48
10 associated with store 14. In each of the above embodiments, according to one example system, each of the points of sale 36, 38 and 40 provide information to respective controllers or to UPC server 12 through the use of wedges, such as wedges 56 and 58. According to another
15 example system, wedges 56, 58 are not utilized and product purchase information is obtained from a register controller, such as register controller 46, incentive controller 44, or from register LAN 48.

After point-of-sale information is received by UPC
20 server 12, point-of-sale information is transmitted on a substantially real-time basis over communication link 26 to manufacturer 16. In the embodiment illustrated in FIGURE 1, communication link 26 is an Internet connection between manufacturers 16 and UPC server 12; however, other suitable
25 connections may be established including satellite links, wireless communications, phone lines, and dedicated lines.

At a step 76, manufacturer 16 may evaluate the point-of-sale information it has obtained from UPC server 12. Evaluation of such information may allow a manufacturer 16
30 to assess whether its products are selling according to desired parameters. For example, a manufacturer may assess

the market share of a particular product in a particular geographic region.

After evaluating the position of its products at step 76, a manufacturer may intercede at step 78 to attempt to effect increased purchases of the manufacturer's products at step 78. Such intercession may take a variety of forms. For example, manufacturer 16 can initiate offers to customers by e-mail, can initiate offers through the use of kiosks conventionally located in stores such as retail stores, can initiate offers for immediate communication at the point-of-sale, can communicate notification of a future electronic discount at the point-of-sale, manufacturer 16 may take other applicative action.

Generation of such incentives may include the methodology described in U.S. Patent 5,687,322 to Deaton et al, including generating incentives based on the purchases of a customer, including examination of the products purchased by the customer in past and/or present transactions or the customer's economic impact on manufacturer 16, as measured by the volume of purchases by a particular customer. Such volume may be measured by dollar amount or other suitable criteria. Generation of incentives to individual customers may also be performed without reference to the market position of any particular product of a manufacturer 16. In each of these examples, UPC server 12 may act as an intermediary to maintain privacy concerns of particular individuals shopping at store 14. Thus, UPC server 12 can block, or prevent, providing of any of these types of offers to the customer. UPC server 12 may act as an intermediary by maintaining, and not providing to manufacturer 16, information that

would allow manufacturer 16 to determine the identity of any individual. For example, e-mail addresses and physical addresses may be maintained only by UPC server 12 and not provided to manufacturers 16.

5 In addition to providing incentives to the individual customers, a manufacturer 16 may intercede by, in response to assessing its position in the market on a substantially real time basis, effect a price change in particular products. Such a price change may be effected through
10 traditional techniques or may utilize UPC server 12 to communicate to retail store 14 that the manufacturer 16 is implementing a price reduction. Such price reduction could include an automatic discount on the selling price at store 14, which would be subsidized by manufacturer 16, or may
15 involve a direct discount to the retail store with a subsequent price change in the selling price at the store 14 determined by the operator of store 14.

 Furthermore, a manufacturer may communicate incentives to customers independent of the current market position of
20 its products. Information that may be transmitted to store 14 by UPC server 12 may include electronic discounts, lines of print for the register printer or an auxiliary printer for communication of messages to the customer, information sent back for writing to the customer's smart card to
25 update things such as point totals, purchase profiles, etc.

 Demographics may also be introduced to provide real-time purchase data based on national, regional, state, city, neighborhood, and even store levels. Purchases by identified customers may be presented to manufacturers
30 based on, for example, customer's total spending levels; customer's level of spending on that manufacturer's

products; customer's level of spending on competitor's products; customer's level of spending on a department, product class, or product family; and customer's level of spending on complimentary or companion products, and other customer data such as size of the household, household income, etc.

The flow of information from UPC server 12 to any individual manufacturer 16 may be based upon particular information subscribed to by manufacturer 16. For example, a particular manufacturer 16 may wish to receive only information regarding the purchase of the manufacturer's products and the purchase of the manufacturer's competitor's products. Thus, UPC server 12 may perform a filtering function in which only subscribed to data is transmitted to any particular manufacturer 16. Such filtering is described in greater detail below in conjunction with FIGURE 6.

FIGURE 6 is a block diagram illustrating additional details of one example of UPC server 12 showing UPC server 12, showing units for receiving information, filtering that information, and distributing the filtered information to appropriate manufacturers 16. In the illustrated embodiment, UPC server 12 includes an input port 80 and an output port 82. Input port 80 represents circuitry and any associated software utilized to receive point-of-sale information from store 14 over communication link 24. Thus, although a limited number of stores 14 are illustrated in FIGURE 1, input port 80 may be configured to receive point-of-sale information for all stores associated with UPC server 12. The point-of-sale information received by input port 80 is provided to filter 84. Filter 84

contains circuitry and/or software that identifies the type of point-of-sale information and associates that type of point-of-sale information with particular subscribing manufacturers 16. Such information is provided to an output port 82 for transmission to a particular manufacturer 16. By providing filtering capabilities, UPC server 12 alleviates a manufacturer 16 from having to process large amounts of information that is unrelated to the manufacturer's business.

FIGURE 7 is a flow chart illustrating the automatic response by a manufacturer 16 in response to the meeting of certain thresholds relating to the manufacturer's products. The process begins at step 85. At a step 86, information is received by manufacturer 16 as described above relating to a particular product. At a step 88, it is determined what criteria will be applied to assessing the position of the manufacturer's products. For example, the market share of the particular product may be the criteria used. As another example, the volume of sales of a particular product may be used as a criteria. As a third example, the relative pricing of the particular product in comparison to its competitor may be used as a criteria. Furthermore, changes in each of these criteria over a particular period of time may be used as a criteria. For simplicity of description, a market share criteria is adopted for the remainder of this example. A market share of 25% is considered desirable and a market share of less than 25% is considered undesirable.

At a step 90 a determination is made of whether the criteria level is exceeded. In this example, if the market share of the particular product manufactured by

manufacturer 16 has a market share greater than 25%, a manufacturer 16 is satisfied and continues to receive information to remain abreast of the success of the manufacturer's product. If the market share is less than
5 25% then intercession is required at step 92, and manufacturer 16 utilizes one of many available options for attempting to increase the criteria level, which in this case is market share. By having the opportunity to receive information on a substantially real-time basis regarding
10 product pricing and purchases, manufacturers 16 may intercede in a timely fashion in a manner not otherwise available.

According to another aspect of the invention, UPC server 12 operates to concentrate messages received from
15 manufacturer 16 for delivery to customers of store 14. In order to effect the purchase of a manufacturer's product, manufacturer 16 may desire to provide incentives to customers of store 14, such as coupons or e-mails. According to one embodiment, UPC server 12 includes
20 circuitry and/or software 70 that operates to concentrate promotional messages into a common e-mail so that customers of store 14 are not inundated with a plurality of undesired promotional e-mails. According to this embodiment, manufacturer 16 transmits a promotional e-mail to UPC
25 server 12 for receipt by a particular customer of store 14. Manufacturer 16 identifies the customer of store 14 by some sort of identification number. UPC server 12 also receives a plurality of other promotional messages for receipt by
30 the same customer of store 14, but from different manufacturers 16. UPC server 16 consolidates these e-mails into a common e-mail that is sent to an e-mail address

known by UPC server 12 but not by manufacturers 16. This process helps maintain the privacy of the customer of store 14 and also reduces the number of e-mails received by the customer.

5 FIGURE 8 is a block diagram of an example UPC server 12 containing circuitry and/or software operable to concentrate e-mails provided by a plurality of manufacturers 16 for receipt by a customer of a store 14. In this embodiment, UPC server 12 includes an input port system 94 for receiving a plurality of e-mails from a
10 plurality of manufacturers 16. These e-mails are provided to a concentrator system 96. Concentrator system 96 consolidates a plurality of e-mails destined for a common user into a common e-mail message. This common e-mail
15 message is provided to output port system 98, which in turn transmits the common e-mail to a customer of store 14. In this manner, UPC server 12 also operates to facilitate transmission of promotional messages to the customer, in addition to providing a means of communication of point-of-sale data to a manufacturer on a substantially real-time
20 basis.

 According to another aspect of the invention, UPC server includes circuitry and/or software for facilitating both coupon redemption validation and electronic settlement
25 mechanisms for incentives offered by the manufacturer, as illustrated in FIGURE 9.

 FIGURE 9 is a block diagram illustrating the use of UPC server in facilitating coupon redemption validation and electronic crediting. Traditionally, coupons are marked
30 with a Uniform Product Code and thus, bar codes scanned from a coupon may also be provided to manufacturer 16 by

UPC server 12 as indicated by arrow 102. Thus, manufacturer 16 is able to receive both the product Uniform Product Code and the Uniform Product Code associated with a coupon for that product. Therefore, the manufacturer may
5 verify the proper redemption of a manufacturer coupon and provide an appropriate credit to store 14. Such redemption verification includes verifying that the product associated with the coupon is actually purchased. Verification may also include verifying the price at which the product was
10 purchased. In addition, for incentives associated with a particular customer, the identity of the person receiving a discount may be verified. Alternatively, UPC server 12 may include circuitry and/or software 70 for also performing this validation and for providing manufacturer
15 16 of a summary of the number and amount of coupons redeemed for the particular manufacturer. In either event, once verified manufacturer 16 may effect a credit, demonstrated by arrow 104, directed to store 14 in the amount of the redeemed coupons.

20 FIGURE 10 is a block diagram showing an additional embodiment of the invention in which UPC server 12 facilitates electronic settlement of credit and debits between store 14 and manufacturer 16. According to one aspect of the invention, manufacturer 16 may respond in a
25 substantially real-time basis to market developments to attempt to adjust the relative market share of a manufacturer's product, or attempt to adjust to other market conditions to attempt to generate desirable product sales of the manufacturer's products.

30 One adjustment made by manufacturer 16 is the downward adjustment of price at which the manufacturer's product

will be sold. Manufacturer 16 may effect such a downward adjustment in price by specifying to store 14 the price at which the store should sell the product and by granting a credit to the store 14 for each such product purchased.

5 Such a method for adjusting to market conditions may require a settlement mechanism between manufacturer 16 and store 14 to account for the lower price offered by store 14 at the request of manufacturer 16. UPC server 12 therefore, may receive from store 14 Uniform Product Codes and the price information that is also transmitted to manufacturer 16. Manufacturer 16 may then be able to assess the number of its products sold at a discount and the amount of discount owed store 14. In response, manufacturer 16 may provide a credit notification through

10 UPC server 12 for transmission to store 14, thus effecting electronic settlement of temporary price reductions offered by a manufacturer and implemented by a store. Such electronic settlement may also be utilized to compensate store 14 for redeemed coupons or application of other discounts effected at the initiative of manufacturer 16.

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FIGURE 11 is a block diagram of a system 106 for remotely effecting a product price change in a retail store. System 106 includes a tag controller 108 connected to a plurality of electronic tags 112 via a communication link 114. According to one embodiment, communication link 114 comprises an FM transmitter for transmitting to electronic tags 112 the price to be displayed on each individual electronic tag 112. According to another embodiment, communication link 114 comprises a suitable

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conductive transmission medium, such as electrical wires. The system also includes a UPC server 12 connected to tag

controller 110 via a communication link 110. According to one embodiment, tag controller 108 is located in a store, such as store 14, that is connected to UPC server 12. According to the same embodiment, communication link 110
5 utilizes the Internet. Communication link 110 allows UPC server 12 to provide an updated price for an item, such as the manufacturer's product, in response to the determination by the manufacturer based on substantially real-time data that it would be desirable to effect a
10 change in price of the manufacturer's product. UPC server 12 communicates a signal indicating such a change to tag controller 108. Tag controller then provides such a signal along communication link 114 to a particular electronic tag 112 associated with the manufacturer product. Electronic
15 tags 112 may be positioned, on a shelf near the location of the product. UPC server 12 may also communicate the price change to store 14 so that store 14 may maintain for its own records the adjusted price and verify any credits provided by manufacturer 16.

20 Therefore, manufacturer 16 may remotely effect a price change in one of its products in response to the analysis of data regarding the sale of its products or its competitors products. In addition, tag controller 108 may also provide price information to UPC server 12 so that the
25 price information received from points of sale 36, 38 and 40 may be verified against the prices displayed by the electronic tags 112 in store 14.

Further, UPC server 12 may communicate the price changes to register controller 46 to maintain consistency
30 between electronic tags 112 and register controller 46. Alternatively, register controller 44 may communicate

directly with register controller 44, with register controller 44 providing the price change to tag controller 108.

In addition to providing product purchase and price information at the point-of-sale to the manufacturer, UPC server 12 also allows access to customers of product purchase and pricing information.

FIGURE 12 illustrates a block diagram of a portion of system 10, showing the exchange of communication between customer computer 18 and UPC server 12. In this example, a user of customer computer 18 submits a shopping list to UPC server 12, as designated by arrow 116. In response, UPC server 12 submits a price list having the price of each item at each store 14 at which the user might shop, as designated by arrow 118. Therefore, by accessing UPC server 12, customers may determine at which store to shop for all items or for particular items. As an example, a customer selects one or more stores to price items and enters items to be priced. The customer's purchase history is used to aid the customer in selecting items for pricing. As items are presented for pricing, deals can optionally be presented to the customer that are based on items being priced. For example, Brand A paper towels is presented in the customer's list for pricing, so a deal that is stored for Brand B paper towels is presented to the customer. The prices for the customer's items are accessed from each store's item list and presented to the customer in total. One or more of the stores may have discount rates stored based on a customer's spending level. For example, the customer spends an average of \$135.00 per week at Store A, and Store A has stored in its pricing table that any

customer spending on average \$75.00 or more per week would be presented with an incentive of 5% on purchases totaling \$50.00 to \$75.00 and 8% on purchase totals that exceed \$75.00. This discount would be factored in and presented to the customer. The customer would then print out the shopping list stored by retail aisle for that particular store to facilitate shopping efficiency. Alternatively, the list could be processed for home delivery.

Further, discounts may be electronically stored on UPC server 12 or a web site 124 associated with store 14 for subsequent access by the customer. The electronic discounts may also communicate to store 14 for application when the customer is identified purchasing the product associated with the discount. Alternatively, the electronic discounts may be made available to customer in a printed format by allowing customer computer to download a redeemable coupon stored on either a store web site 124 or UPC server 12. The customer may then print the redeemable coupon on a printer associated with customer computer 18. Such a coupon may include a unique identification number that is available at store 14 to prevent unlawful duplication of redeemable coupons. Once a coupon having a unique identification number is redeemed, no other coupons having that same number will be redeemed. Alternatively, a manufacturer may communicate product discounts to store web site 124, through UPC server 12, for viewing by customers.

Furthermore, when shopping list 116 is submitted, UPC server may offer to one or more manufacturers 16 the opportunity to provide incentives to the particular customer submitting a shopping list. For example,

manufacturer 16 may wish to offer incentives to such a customer, the content of the incentive being directed to the manufacturer's competing product for a product submitted in the shopping list. The providing of such incentives is illustrated by arrow 120. In addition, UPC server 12 may communicate a sorted shopping list, which may or may not include customer incentives, that is configured according to the placement of the various items in a particular store 14, as designated by arrow 122. Thus, the customer may receive an e-mail displaying a map of the aisles of the store with the products provided by the customer in the shopping list at 116 indicated in a location corresponding to the actual location of the particular product in the store 14. Therefore, a particular customer may be more likely to visit a store in which a shopping list is provided showing the particular location of each item the customer desires. For example, a shopper may actually be a spouse or friend of the underlying purchaser, and may not typically frequent a particular store. Therefore, having a list identifying the particular location at which each particular item is offered for sale may induce a customer to use the services of a particular store rather than a different store.

Although the present invention and its advantages have been described in detail, it should be understood that various changes, substitutions, and alternatives can be made therein without departing from the spirit and scope of the present invention as defined by the appended claims. For example, an embodiment of the invention has been described in the context of utilizing UPC codes; however, it is explicitly contemplated that the teachings of the

invention may be incorporated with other types of codes representative of products, including existing codes and codes yet to be developed.

項目	2000年		2001年		2002年		2003年		2004年		2005年		2006年		2007年		2008年		2009年		2010年		2011年		2012年		2013年		2014年		2015年		2016年		2017年		2018年		2019年		2020年		2021年		2022年		2023年		2024年		2025年		2026年		2027年		2028年		2029年		2030年		2031年		2032年		2033年		2034年		2035年		2036年		2037年		2038年		2039年		2040年		2041年		2042年		2043年		2044年		2045年		2046年		2047年		2048年		2049年		2050年		2051年		2052年		2053年		2054年		2055年		2056年		2057年		2058年		2059年		2060年		2061年		2062年		2063年		2064年		2065年		2066年		2067年		2068年		2069年		2070年		2071年		2072年		2073年		2074年		2075年		2076年		2077年		2078年		2079年		2080年		2081年		2082年		2083年		2084年		2085年		2086年		2087年		2088年		2089年		2090年		2091年		2092年		2093年		2094年		2095年		2096年		2097年		2098年		2099年		2100年	
	項目	2000年	2001年	2002年	2003年	2004年	2005年	2006年	2007年	2008年	2009年	2010年	2011年	2012年	2013年	2014年	2015年	2016年	2017年	2018年	2019年	2020年	2021年	2022年	2023年	2024年	2025年	2026年	2027年	2028年	2029年	2030年	2031年	2032年	2033年	2034年	2035年	2036年	2037年	2038年	2039年	2040年	2041年	2042年	2043年	2044年	2045年	2046年	2047年	2048年	2049年	2050年	2051年	2052年	2053年	2054年	2055年	2056年	2057年	2058年	2059年	2060年	2061年	2062年	2063年	2064年	2065年	2066年	2067年	2068年	2069年	2070年	2071年	2072年	2073年	2074年	2075年	2076年	2077年	2078年	2079年	2080年	2081年	2082年	2083年	2084年	2085年	2086年	2087年	2088年	2089年	2090年	2091年	2092年	2093年	2094年	2095年	2096年	2097年	2098年	2099年	2100年																																																																																																				
1. 総人口	127,800,000	128,000,000	128,200,000	128,400,000	128,600,000	128,800,000	129,000,000	129,200,000	129,400,000	129,600,000	129,800,000	130,000,000	130,200,000	130,400,000	130,600,000	130,800,000	131,000,000	131,200,000	131,400,000	131,600,000	131,800,000	132,000,000	132,200,000	132,400,000	132,600,000	132,800,000	133,000,000	133,200,000	133,400,000	133,600,000	133,800,000	134,000,000	134,200,000	134,400,000	134,600,000	134,800,000	135,000,000	135,200,000	135,400,000	135,600,000	135,800,000	136,000,000	136,200,000	136,400,000	136,600,000	136,800,000	137,000,000	137,200,000	137,400,000	137,600,000	137,800,000	138,000,000	138,200,000	138,400,000	138,600,000	138,800,000	139,000,000	139,200,000	139,400,000	139,600,000	139,800,000	140,000,000	140,200,000	140,400,000	140,600,000	140,800,000	141,000,000	141,200,000	141,400,000	141,600,000	141,800,000	142,000,000	142,200,000	142,400,000	142,600,000	142,800,000	143,000,000	143,200,000	143,400,000	143,600,000	143,800,000	144,000,000	144,200,000	144,400,000	144,600,000	144,800,000	145,000,000	145,200,000	145,400,000</																																																																																																																	

WHAT IS CLAIMED IS:

1. A method for use in marketing comprising:
detecting, at the point-of-sale, a plurality of
Uniform Product Codes associated with respective items
5 purchased by a customer; and
transmitting, on a substantially real-time basis, the
plurality of Uniform Product Codes over the Internet to a
remote computer connected to the Internet.
- 10 2. The method of Claim 1, and further comprising
receiving, at the point-of-sale, a plurality of signals
indicative of the prices of the items.
- 15 3. The method of Claim 1, and further comprising
receiving, at the point-of-sale, from the remote computer
an advertisement message for receipt by the customer and
communicating the advertisement message to the customer.
- 20 4. The method of Claim 3, wherein communicating the
advertisement message to the customer comprises printing an
advertisement message on a customer receipt.
- 25 5. The method of Claim 1, wherein receiving, at the
point-of-sale, a plurality of Uniform Product Codes
comprises receiving at an electronic cash register, at the
point-of-sale, a plurality of Uniform Product Codes.

6. The method of Claim 5, wherein receiving, at the point-of-sale, a plurality of Uniform Product Codes comprises receiving, at a wedge disposed between a cash register and a scanner for scanning the respective items,
5 at the point-of-sale, a plurality of Uniform Product Codes.

7. The method of Claim 1, and further comprising transmitting the plurality of Uniform Product Codes from the point-of-sale to a router associated with a plurality
10 of points-of-sale, and wherein transmitting, on a substantially real-time basis, the plurality of Uniform Product Codes over the Internet to a remote computer connected to the Internet comprises transmitting, from the router, on a substantially real-time basis, the plurality
15 of Uniform Product Codes over the Internet to a remote computer connected to the Internet.

8. The method of Claim 1, and further comprising transmitting, on a substantially real-time basis, the plurality of Uniform Product Codes to an incentive controller connected to the point-of-sale, and wherein transmitting, on a substantially real-time basis, the plurality of Uniform Product Codes over the Internet to a remote computer connected to the Internet comprises
20 transmitting, from the incentive controller, on a substantially real-time basis, the plurality of Uniform Product Codes over the Internet to a remote computer connected to the Internet.
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9. The method of Claim 1, and further comprising transmitting, on a substantially real-time basis, the plurality of Uniform Product Codes to a register controller connected to the point-of-sale, and wherein transmitting, on a substantially real-time basis the plurality of Uniform Product Codes over the Internet comprises transmitting, from the register controller, on a substantially real-time basis, the plurality of Uniform Product Codes over the Internet to a remote computer connected to the Internet.

10. The method of Claim 1, and further comprising transmitting, on a substantially real-time basis, the plurality of Uniform Product Codes from the remote computer connected to the Internet to a computer accessible by the manufacturer of a product associated with at least one of the Uniform Product Codes.

11. The method of Claim 10, wherein the computer accessible by the manufacturer is connected to the Internet.

12. The method of Claim 10, and further comprising transmitting, on a substantially real-time basis, data from the computer accessible by the manufacturer to the point-of-sale.

13. The method of Claim 12, wherein the data transmitted from the computer accessible by the manufacturer to the point-of-sale comprises transmitting, on a substantially real-time basis, the data through the remote computer to the point-of-sale.

14. The method of Claim 12, wherein transmitting, on a substantially real-time basis, the data to the point-of-sale comprises transmitting, on a substantially real-time basis, data associated with an incentive for a customer at the point-of-sale.

15. The method of Claim 14, wherein transmitting, on a substantially real-time basis, data associated with an incentive for a customer at the point-of-sale comprises transmitting, on a substantially real-time basis, data associated with an incentive for the customer at the point-of-sale in response to receiving, at the computer accessible by the manufacturer, Uniform Product Codes associated with respective items purchased by the customer.

16. A system for use in marketing comprising:

a scanner for reading Uniform Product Codes of items presented at the point-of-sale of a retail store;

5 an electronic cash register in communication with the scanner and operable to receive the Uniform Product Codes; and

a communication link providing data representative of the Uniform Product Codes on a substantially real-time basis to the Internet.

10 17. The system of Claim 16, and further comprising a printer for printing information associated with the items.

15 18. The system of Claim 16, and further comprising a computer connected to the Internet and located remote from the retail store for receiving the provided Uniform Product Codes.

20 19. The system of Claim 18, wherein the computer is operable to communicate on a substantially real-time basis the Uniform Product Codes to a client.

25 20. The system of Claim 19, wherein the client is a product manufacturer.

21. The system of Claim 19, wherein the client is a retailer.

30 22. The system of Claim 16, wherein the communication link comprises a wedge disposed between the scanner and the electronic cash register.

23. The system of Claim 16, wherein the communication link comprises a first end and a second end, the first end disposed between the scanner and the electronic cash register and the second end connected to the Internet.

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24. The system of Claim 23, wherein the communication link comprises a wedge disposed between the scanner and the electronic cash register.

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25. The system of Claim 16, wherein the communication link comprises a router coupled to the point-of-sale.

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26. The system of Claim 16, wherein the communication link comprises a router and an associated connection between the router and the point-of-sale.

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27. The system of Claim 16, wherein the communication link comprises an incentive controller coupled to the point-of-sale.

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28. The system of Claim 16, wherein the communication link comprises a register local area network.

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29. The system of Claim 16, wherein the communication link comprises a register controller coupled to the point-of-sale.

30. The system of Claim 16, wherein the communication link comprises a unit connected to the point-of-sale, the unit selected from the group consisting of a router, an incentive controller, and a register controller.

31. A system for use in marketing, the system comprising:

an electronic cash register for processing items at the point-of-sale;

5 a computer remote from the point-of-sale and connected to the Internet; and

a substantially real-time communication link operable to carry information associated with the items from the point-of-sale to the Internet on a substantially real-time basis for receipt by the computer.

32. The system of Claim 31, and further comprising a printer for printing information concerning the processed items.

33. The system of Claim 32, wherein the substantially real-time communication link is further operable to carry information from the Internet on a substantially real-time basis to the point-of-sale.

34. The system of Claim 33, wherein the substantially real-time communication link is connected to the printer.

35. The system of Claim 31, wherein the substantially real-time communication link is further operable to carry information from the Internet on a substantially real-time basis to the point-of-sale.

36. The system of Claim 31, and further comprising a router coupled to the point-of-sale.

37. The system of Claim 31, and further comprising an incentive controller coupled to the point-of-sale.

5 38. The system of Claim 31, wherein the communication link comprises a register local area network.

10 39. The system of Claim 31, and further comprising a scanner for scanning Uniform Product Codes of the items and wherein the communication link comprises a wedge disposed between the electronic cash register and the scanner.

40. The system of Claim 39, wherein the wedge comprises an RS-232 Y-connector.

41. A method for use in advertising, the method comprising:

receiving, at the point-of-sale, Uniform Product Codes associated with items presented at the point-of-sale; and

5 transmitting, without manipulation, the Uniform Product Codes over the Internet to a computer remote from the point-of-sale.

42. A method for use in advertising, the method comprising:

receiving, at a computer through the Internet, substantially real-time product purchase information for products purchased at a retail store; and

providing, by a computer, the product purchase information associated with only particular products of the purchased products to a client, the particular products associated with the client.

43. The method of Claim 42, wherein receiving, at a computer through the Internet, substantially real-time product purchase information comprises receiving Uniform Product Codes for the products purchased at the retail store.

44. The method of Claim 43, wherein providing, by a computer, the product purchase information associated with only particular products of the purchased products comprises providing, by a computer, product purchase information associated with products that are competitive to products manufactured by the client.

45. The method of Claim 43, wherein providing, by a computer, the product purchase information associated with only particular products of the purchased products comprises providing, by a computer, the Uniform Product Codes associated with products manufactured by the manufacturer.

46. The method of Claim 42, wherein receiving, at a computer through the Internet, substantially real-time product purchase information comprises receiving, at a computer through the Internet, Uniform Product Codes associated with purchased products and the prices at which the products were purchased.

47. The method of Claim 46, wherein providing, by a computer, the product purchase information comprises providing, by a computer, the Uniform Product Codes for products manufactured by the client and the prices of the purchased products that are manufactured by the client.

48. The method of Claim 46, wherein providing, by a computer, the product purchase information comprises providing, by a computer, the Uniform Product Codes for purchased products that are competitive to products manufactured by the client and providing the prices at which the products competitive to the manufacturer were purchased.

49. A method of use in advertising comprising:

detecting, at a computer through the Internet, a plurality of incentives to be communicated to a plurality of customers;

5 compiling, by the computer, all incentives associated with respective customers into a single document; and
 communicating the single document to the respective customer.

10 50. The method of Claim 49, wherein detecting, at a computer through the Internet, a plurality of incentives to be communicated to a plurality of customers comprises detecting, at a computer operable to receive substantially real-time product purchase information over the Internet.

15 51. The method of Claim 49, wherein detecting, at a computer through the Internet, a plurality of incentives comprises detecting, at a computer through the Internet, a plurality of electronic mail messages.

20 52. The method of Claim 49, wherein compiling, by the computer, all incentives associated with respective customers into a single document comprises compiling, by the computer, a plurality of electronic mail messages
25 associated with respective customers into a single electronic mail message.

53. The method of Claim 49, wherein detecting, at a computer through the Internet, a plurality of incentives to be communicated to a plurality of customers comprises detecting, at a computer through the Internet, a plurality of incentives associated with respective customer identification numbers that are representative of the identity of respective customers, and wherein compiling, by the computer, all incentives associated with respective customers into a single document comprises compiling, by the computer, all incentives associated with a particular customer identification number.

54. The method of Claim 49, wherein communicating the single document to the respective customer comprises transmitting an electronic mail message to the respective customer.

55. The method of Claim 49, wherein communicating the single document comprises communicating the single document to a point-of-sale.

56. The method of Claim 55, wherein communicating the single document to the respective customer comprises printing the single document on a customer receipt located at the point-of-sale.

57. The method of Claim 49, and further comprising receiving a plurality of shopping lists for a plurality of respective customers, and transmitting data representative of at least one item on the shopping list to a product manufacturer prior to receiving the plurality of incentives.

58. The method of Claim 49, wherein compiling, by the computer, all incentives associated with respective customers into a single document comprises compiling, by the computer a plurality of incentives associated with competing products.

59. A method for use in marketing, the method comprising:

receiving, at a computer on a substantially real-time basis, signals indicative of product purchase information for a plurality of products purchased from a retail store;

comparing, by the computer, the product purchase information to a desired product purchase criteria to determine whether the desired product purchase criteria is achieved; and

in response to the determination, communicating to the retail store a price variation for the at least one product.

60. The method of Claim 59, wherein receiving signals indicative of product purchase information comprises receiving Uniform Product Codes of purchased products of a particular manufacturer.

61. The method of Claim 60, wherein receiving signals indicative of product purchase information comprises receiving Uniform Product Codes for competing products of products of a particular manufacturer.

62. The method of Claim 59, wherein the desired product purchase criteria comprises a predetermined market share of a particular product.

63. The method of Claim 59, wherein the desired product purchase criteria comprises a predetermined change in market share of a particular product.

64. The method of Claim 59, wherein receiving, at a computer on a substantially real-time basis, signals indicative of product purchase information comprises receiving, at a computer on a substantially real-time basis, signals indicative of product purchase information through the Internet.

65. The method of Claim 59, wherein communicating to the retail store a price variation comprises communicating the price variation through the Internet to the retail store.

66. The method of Claim 64, wherein communicating to the retail store a price variation comprises communicating the price variation to an electronic shelf tag located in the retail store.

67. The method of Claim 59, wherein receiving, at a computer on a substantially real-time basis, signals indicative of product purchase information comprises receiving signals indicative of product purchase information at a remote computer connected to the retail store through the Internet, the remote computer located remote from the retail store.

68. The method of Claim 59, wherein receiving, at a computer on a substantially real-time basis, the signals indicative of product purchase information includes receiving signals indicative of the prices of purchased products.

69. The method of Claim 59, wherein receiving signals indicative of product purchase information comprises receiving signals indicative of the identities of a plurality of purchased products.

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70. The method of Claim 59, wherein receiving, at a computer on a substantially real-time basis, signals indicative of product purchase information comprises receiving, at a computer accessible by a product manufacturer on a substantially real-time basis, signals indicative of product purchase information of products manufactured by the manufacturer.

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71. A method for use in marketing, the method comprising:

receiving, at a remote location through the Internet,
substantially real-time product purchase information from
5 a retail store in conjunction with an identification code
of a customer purchasing the products;

determining at the remote location an incentive to be
communicated to the identified customer; and

10 communicating data relative to the incentive to the
identified customer at the point-of-sale.

72. The method of Claim 71, wherein determining at
the remote location an incentive to be communicated to the
identified customer comprises determining an incentive
15 based upon the product purchased information.

73. The method of Claim 71, wherein determining at
the remote location an incentive to be communicated to the
identified customer comprises determining an incentive
20 based on information independent of the product purchase
information.

74. The method of Claim 72, wherein determining an
incentive further comprises determining the incentive based
25 on past purchases of the identified customer.

75. The method of Claim 71, wherein determining an
incentive comprises determining an incentive based upon the
past purchases of the identified customer.

76. The method of Claim 71, wherein determining an incentive to be communicated to the identified customer comprises determining an incentive that is associated with the products.

5

77. The method of Claim 71, wherein determining an incentive to be communicated to the identified customer comprises determining an incentive that is not associated with the products.

10

78. The method of Claim 71, wherein communicating data relative to the incentive comprises communicating a notification of a future electronic discount to the identified customer at the point-of-sale.

15

79. The method of Claim 71, wherein communicating data relative to the incentive comprises communicating data relative to the incentive to a printer located at the point-of-sale.

80. A method of coupon redemption validation of a retail store comprising:

receiving, at a computer remote from the retail store through the Internet, signals indicative of a bar code of a coupon presented by a customer, the coupon associated with a particular product;

receiving, at the computer remote from the retail store through the Internet, signals indicative of bar codes of a plurality of products purchased by the customer;

confirming by the computer that the customer purchased the product associated with the coupon; and

in response to the confirmation, automatically communicating a credit to the retail store for redemption of the coupon.

81. The method of Claim 80, wherein confirming by the computer that the customer purchased the product associated with the coupon comprises comparing the bar code of the coupon to the plurality of bar codes of the products purchased by the customer.

82. The method of Claim 80, wherein automatically communicating a credit comprises automatically transmitting an electronic mail message.

83. The method of Claim 80, wherein receiving, at a computer remote from the retail store through the Internet, signals indicative of a bar code comprises receiving at a computer remote from the retail store through the Internet, from the point-of-sale of the products, signals indicative of a bar code of a coupon presented by a customer.

84. The method of Claim 80, wherein receiving from the point-of-sale comprises receiving from a wedge disposed between a scanner and an electronic cash register at the point-of-sale.

5

項目	単位	数値	単位	数値	単位	数値	単位	数値
1. 総人口	人	1,234,567	2. 男性人口	人	612,345	3. 女性人口	人	622,222
4. 出生人口	人	12,345	5. 死亡人口	人	8,765	6. 自然増減	人	3,580
7. 人口密度	人/平方キロメートル	123.45	8. 平均年齢	歳	34.56	9. 出生率	‰	10.12
10. 死亡率	‰	7.08	11. 自然増減率	‰	2.90	12. 人口構成	人	1,234,567
13. 人口構成	人	1,234,567	14. 人口構成	人	1,234,567	15. 人口構成	人	1,234,567
16. 人口構成	人	1,234,567	17. 人口構成	人	1,234,567	18. 人口構成	人	1,234,567
19. 人口構成	人	1,234,567	20. 人口構成	人	1,234,567	21. 人口構成	人	1,234,567
22. 人口構成	人	1,234,567	23. 人口構成	人	1,234,567	24. 人口構成	人	1,234,567
25. 人口構成	人	1,234,567	26. 人口構成	人	1,234,567	27. 人口構成	人	1,234,567
28. 人口構成	人	1,234,567	29. 人口構成	人	1,234,567	30. 人口構成	人	1,234,567
31. 人口構成	人	1,234,567	32. 人口構成	人	1,234,567	33. 人口構成	人	1,234,567
34. 人口構成	人	1,234,567	35. 人口構成	人	1,234,567	36. 人口構成	人	1,234,567
37. 人口構成	人	1,234,567	38. 人口構成	人	1,234,567	39. 人口構成	人	1,234,567
40. 人口構成	人	1,234,567	41. 人口構成	人	1,234,567	42. 人口構成	人	1,234,567
43. 人口構成	人	1,234,567	44. 人口構成	人	1,234,567	45. 人口構成	人	1,234,567
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64. 人口構成	人	1,234,567	65. 人口構成	人	1,234,567	66. 人口構成	人	1,234,567
67. 人口構成	人	1,234,567	68. 人口構成	人	1,234,567	69. 人口構成	人	1,234,567
70. 人口構成	人	1,234,567	71. 人口構成	人	1,234,567	72. 人口構成	人	1,234,567
73. 人口構成	人	1,234,567	74. 人口構成	人	1,234,567	75. 人口構成	人	1,234,567
76. 人口構成	人	1,234,567	77. 人口構成	人	1,234,567	78. 人口構成	人	1,234,567
79. 人口構成	人	1,234,567	80. 人口構成	人	1,234,567	81. 人口構成	人	1,234,567
82. 人口構成	人	1,234,567	83. 人口構成	人	1,234,567	84. 人口構成	人	1,234,567
85. 人口構成	人	1,234,567	86. 人口構成	人	1,234,567	87. 人口構成	人	1,234,567
88. 人口構成	人	1,234,567	89. 人口構成	人	1,234,567	90. 人口構成	人	1,234,567
91. 人口構成	人	1,234,567	92. 人口構成	人	1,234,567	93. 人口構成	人	1,234,567
94. 人口構成	人	1,234,567	95. 人口構成	人	1,234,567	96. 人口構成	人	1,234,567
97. 人口構成	人	1,234,567	98. 人口構成	人	1,234,567	99. 人口構成	人	1,234,567
100. 人口構成	人	1,234,567	101. 人口構成	人	1,234,567	102. 人口構成	人	1,234,567
103. 人口構成	人	1,234,567	104. 人口構成	人	1,234,567	105. 人口構成	人	1,234,567
106. 人口構成	人	1,234,567	107. 人口構成	人	1,234,567	108. 人口構成	人	1,234,567
109. 人口構成	人	1,234,567	110. 人口構成	人	1,234,567	111. 人口構成	人	1,234,567

85. A method for use in marketing, comprising:
displaying the price of an item by an electronic shelf
tag at a location in a retail store proximate to the item;
providing a communication link between the electronic
5 shelf tag and the Internet; and
communicating, from a computer connected to the
Internet to the electronic shelf tag, the price of the item
to be displayed on the electronic shelf tag.

10 86. The method of Claim 85, wherein providing a
communication link comprises providing a tag controller.

87. The method of Claim 86, wherein providing a
communication link further comprises providing a radio
15 frequency transmitter for transmitting signals to the
electronic shelf tag.

88. The method of Claim 86, wherein providing a
communication link further comprises providing a conductive
20 medium between the tag controller and the electronic shelf
tag.

89. The method of Claim 85, and further comprising receiving, at the computer connected to the Internet, on a substantially real-time basis, at least one Uniform Product Code associated with a respective product purchased by a customer in the retail store, and wherein communicating, from a computer connected to the Internet to an electronic shelf tag, the price of the item to be displayed on the electronic shelf tag comprises communicating, from a computer connected to the Internet to the electronic shelf tag, the price of the item to be displayed on the electronic shelf tag in response to receiving the at least one Uniform Product Code.

90. The method of Claim 89, wherein receiving at least one Uniform Product Code comprises receiving at least one Uniform Product Code associated with at least one product competitive to the item.

91. The method of Claim 90, wherein communicating, from a computer connected to the Internet to the electronic shelf tag, the price of the item comprises communicating, from a computer connected to the Internet to the electronic shelf tag, the price of the item based on the price of the competitive product.

92. A method for use in marketing, comprising:

communicating to a retail store a reduction in the price at which a product will be sold at the retail store;

receiving, on a substantially real-time basis through the Internet, a Uniform Product Code associated with the product when the product is purchased and the price at which the product was purchased;

in response to receiving the Uniform Product Code and the price at which the product was purchased, determining a credit for the retail store to compensate the retail store for selling the product at the reduced price; and

communicating the credit to the retail store.

93. The method of Claim 92, wherein communicating to a retail store a reduction in the price at which a product will be sold at the retail store comprises communicating, by a computer through the Internet, to a retail store a reduction in the price at which a product will be sold at the retail store.

94. The method of Claim 92, wherein determining a credit for the retail store comprises comparing the price at which the product was purchased to a standard price for the product.

95. The method of Claim 92, wherein communicating the credit to the retail store comprises communicating, by a computer connected to the Internet, the credit to the retail store.

96. A method for use in marketing, comprising:

receiving, at a remote computer, product purchase information of a plurality of retail stores, the product purchase information including price information, the remote computer located remote from the retail stores;

receiving, at the remote computer, a shopping list of a customer, the shopping list including a plurality of products that the customer wishes to purchase; and

in response to receiving the shopping list, communicating to the customer, by the computer, price information from each of the retail stores associated with the items on the shopping list.

97. A method for use in marketing, comprising:

receiving, at a remote computer, product purchase
information of a retail store, the product purchase
information including price information, the remote
computer located remote from the retail stores;

receiving, at the remote computer, a shopping list of
a customer, the shopping list including a plurality of
products that the customer wishes to purchase;

transmitting the shopping list to a manufacturer;

receiving an incentive, from the manufacturer, for one
of the products that the customer wishes to purchase; and
communicating the incentive to the customer.

POINT-OF-SALE SERVER AND METHOD

ABSTRACT OF THE DISCLOSURE

A method for use in marketing includes detecting, at the point-of-sale, a plurality of Uniform Product Codes associated with respective items purchased by a customer. The method also includes transmitting, on a substantially real-time basis, the plurality of Uniform Product Code over the Internet to a remote computer connected to the Internet.

5

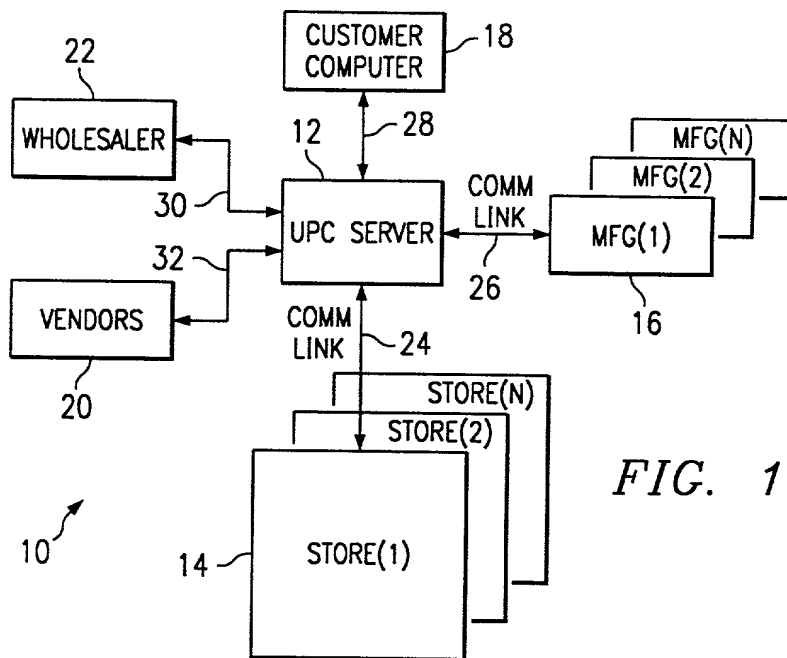


FIG. 1

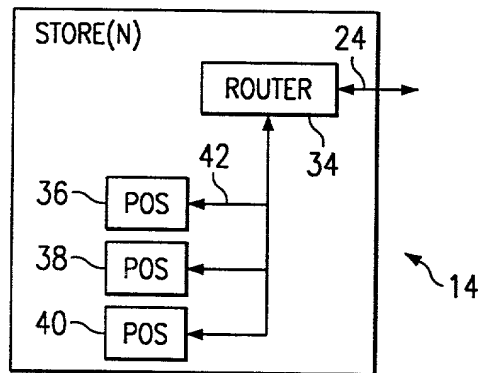


FIG. 2A

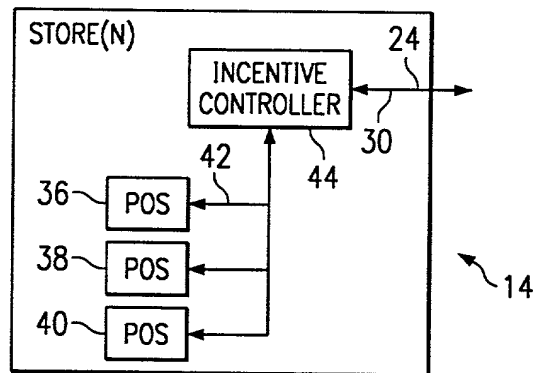


FIG. 2C

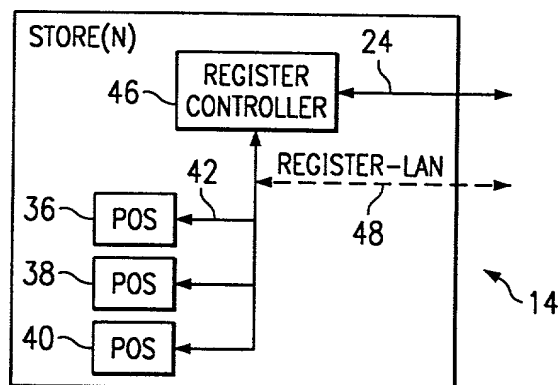


FIG. 2B

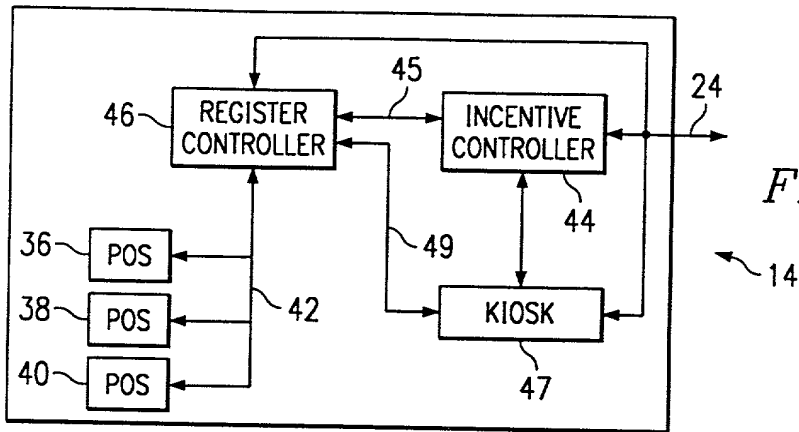


FIG. 2D

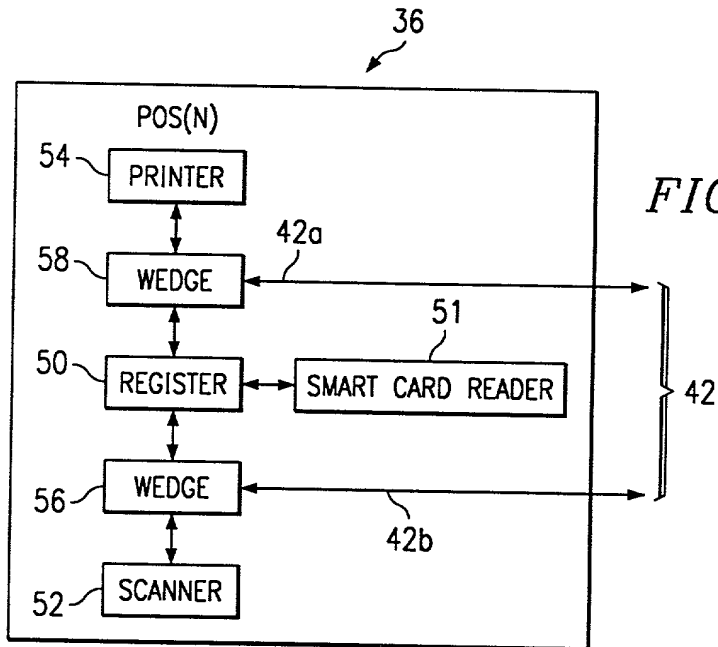


FIG. 3

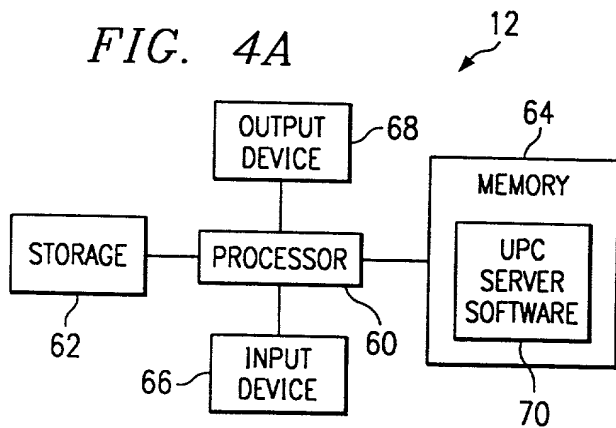


FIG. 4A

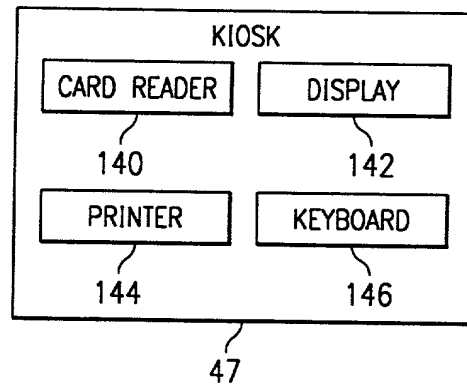


FIG. 4B

FIG. 5

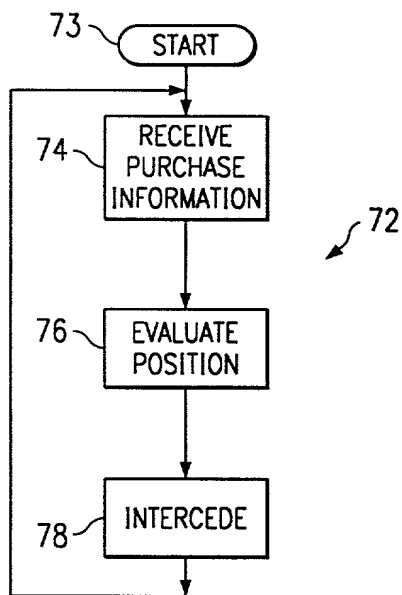


FIG. 6

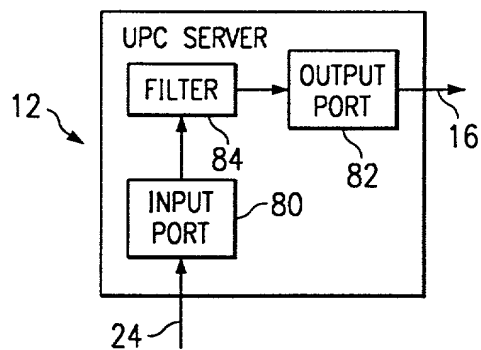


FIG. 7

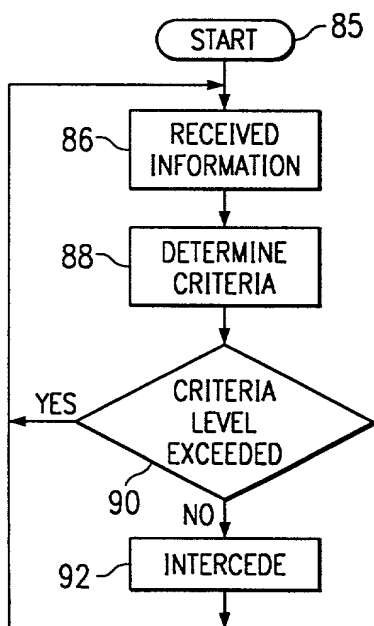
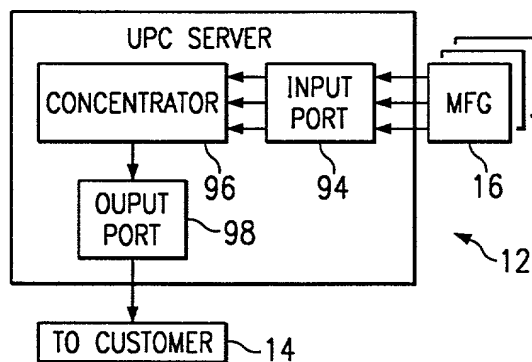


FIG. 8



DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I declare that:

My residence, post office address and citizenship are as stated below next to my name; that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention or design entitled POINT-OF-SALE SERVER AND METHOD the specification of which is attached hereto; that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above; and that I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>Number</u>	<u>Country</u>	<u>Date Filed</u>	<u>Priority Claimed</u> <u>(Yes) (No)</u>
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-----NONE-----

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application(s) in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56 which became available between the

filing date of the prior application(s) and the national or PCT international filing date of this application:

<u>Application</u> <u>Serial Number</u> None	<u>Date Filed</u>	<u>Status</u>
--	-------------------	---------------

I hereby appoint:

Jerry W. Mills	Reg. No. 23,005
Robert M. Chiaviello, Jr.	Reg. No. 32,461
Ann C. Livingston	Reg. No. 32,479
Thomas R. Felger	Reg. No. 28,842
Charles S. Fish	Reg. No. 35,870
Wei Wei Jeang	Reg. No. 33,305
Kevin J. Meek	Reg. No. 33,738
T. Murray Smith	Reg. No. 30,222
Barton E. Showalter	Reg. No. 38,302
David G. Wille	Reg. No. 38,363
Bradley P. Williams	Reg. No. 40,227
Terry J. Stalford	Reg. No. 39,522
Christopher W. Kennerly	Reg. No. 40,675
Harold E. Meier	Reg. No. 22,428
Alexander B. Ching	Reg. No. 41,669
Douglas M. Kubehl	Reg. No. 41,915
Samir A. Bhavsar	Reg. No. 41,617
Thomas R. Nesbitt, Jr.	Reg. No. 22,075
James J. Maune	Reg. No. 26,946
Roger J. Fulghum	Reg. No. 39,678
Rodger L. Tate	Reg. No. 27,399
Scott F. Partridge	Reg. No. 28,142
James B. Arpin	Reg. No. 33,470
James Remenick	Reg. No. 36,902
Jay B. Johnson	Reg. No. 38,193
Robert W. Holland	Reg. No. 40,020
Floyd B. Chapman	Reg. No. 40,555
Randall W. Mishler	Reg. No. 42,006
Robert A. King	Reg. No. 42,738
James L. Baudino	Reg. No. 43,486
Scott T. Morris	Reg. No. 43,818
Tara D. Knapp	Reg. No. 43,723
Luke K. Pedersen	Reg. No. P45,003
Matthew B. Talpis	Reg. No. P45,152
Robin A. Brooks	Reg. No. P44,563
William R. Borchers	Reg. No. P44,549
Brian W. Oaks	Reg. No. P44,981

all of the firm of Baker & Botts, L.L.P., my attorneys with full power of substitution and revocation, to prosecute this

application and to transact all business in the United States Patent and Trademark Office connected therewith, and to file and prosecute any international patent applications filed thereon before any international authorities.

Send Correspondence To:

Baker & Botts, L.L.P.
2001 Ross Avenue
Dallas, Texas 75201-2980

Direct Telephone Calls To:

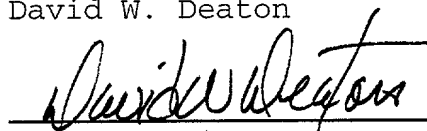
Jerry W. Mills, Esq.
at (214) 953-6665
Atty. Docket No. 026656.0283

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Full name of the first inventor

David W. Deaton

Inventor's signature



Date

7/13/99

Residence (City, County, State)

Abilene, Taylor County, Texas

Citizenship

United States of America

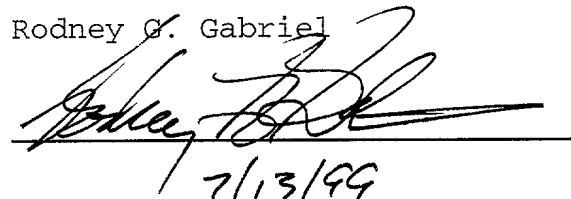
Post Office Address

922 Ruswood Circle
Abilene, Texas 79601

Full name of second inventor

Rodney G. Gabriel

Inventor's signature



Date

7/13/99

Residence (City, County, State)

Abilene, Taylor County, Texas

Citizenship

United States of America

Post Office Address

3157 Bickley
Abilene, Texas 79601